

# ABSTRACT OF SANITARY REPORTS.

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No. 3.

TREASURY DEPARTMENT, U. S. Marine-Hospital Service.—Published in accordance with act of Congress approved February 15, 1893.

## UNITED STATES.

[Reports to the Supervising Surgeon-General M. H. S.]

### *Preliminary Report on the Treatment of Variola by its Antitoxine.*

WASHINGTON, D. C., January 15, 1895.

SIR: During the fall of 1893, while on special duty at the New York Quarantine, application was made to Dr. Cyrus Edson, health commissioner of New York City, for permission to visit the smallpox hospital on North Brother Island for the purpose of making certain observations upon smallpox. Among these was the subject of this letter.

Since then, and until quite recently, my laboratory work and other duties have prevented me from availing myself of the opportunities offered in the smallpox hospital. During the past three weeks I have been able to accomplish something in this direction, and wish to place it before the medical profession for what it is worth.

Just previous to the reappearance of smallpox in this city I had made arrangements with Dr. Ralph Walsh, proprietor of the national vaccine farm, to conduct a line of inquiry concerning the nature of vaccinia, and, while engaged in this, took advantage of the cases of smallpox to put a theory into effect. It has been already demonstrated by Maurice Raynaud and Sternberg that the blood serum of an immune animal destroys the potency of vaccine lymph. It had occurred to me, as well as to others, that this fact could be utilized in the treatment of smallpox by the injection of this serum in patients suffering with the disease.

Accordingly, on December 23, 1894, I took a liter of blood from a heifer calf which had been previously vaccinated on November 26. At the time of bleeding the local effects of the vaccination had disappeared, the animal to all appearances was sound and well. As soon as the blood was withdrawn it was taken to the laboratory, where on the next day about 350 c. c. of tolerably clear serum were drawn off.

A part of the serum was transferred to a small sterilized flask, while another part of equal quantity was passed through a special filter in order to remove the blood corpuscles and any chance bacteria which might have contaminated it.

About 35 minims of pure vaccine lymph (two days old) was added to 2 c. c. of the filtered and unfiltered serum respectively. After a few hours' exposure, the serum was sent out to the vaccine farm and a small heifer was inoculated in the usual manner with each sample. The results were negative in both instances, demonstrating that the process of filtration does not affect its power. The substance which possesses this neutralizing power is soluble, and not confined to the corpuscular elements.

Accordingly I prepared a considerable quantity of this filtered serum and sent it to Dr. Elliot, the physician in charge of the smallpox hospital, accompanied with the request that he would use this serum upon such cases of variola as were in his judgment suitable for the experiment. It was suggested that the treatment be given to fresh cases before the stage of pustulation, for these I thought would react more favorably to the serum than older cases.

As a trial dose 15 c. c. was suggested, to be repeated within from eight to ten hours if there was no reaction or amelioration of the symptoms. It was, however, the opinion that a larger dosage would have to be given before such effects would be noticed.

It was suggested that a careful note should be made of the patient's condition before the administration of the serum, and accurate observations be made of the pulse, respiration, temperature, the presence or absence of albumen in the urine, and the condition of the eruption. It is much to be regretted by Dr. Elliot and myself that an opportunity did not offer to give serum to cases in the first stage of the eruption, whereas the treatment was confined to two which were in the pustular stage.

Being in telephonic communication with Dr. Elliot, we managed to discuss the cases from day to day, and make mutual suggestions as to the modification of treatment. Dr. Elliot kindly sends the notes of the cases under treatment and embodies therein his conclusions, drawn from his observations on the effects of the serum:

SMALLPOX HOSPITAL, *January 16, 1895.*

MY DEAR DOCTOR: In accordance with your request, I herewith transmit the clinical notes of 2 cases treated with the vaccine serum which you so kindly furnished me:

CASE I. Male; negro; age 28; admitted to hospital December 21, 1894, under the diagnosis of variola malignans. His condition on admission was very unfavorable, the eruption confluent, accompanied with a high temperature and violent delirium. The temperature from December 21 to 28 varied from 103.6° F. to 99° F. During this time the temperature steadily declined, whereas the pulse and respiration remained high, the delirium continuing about the same; this was so violent at times that restraint became necessary.

On December 25 considerable hemorrhage occurred in the pustules, and there was much gastric irritation. On December 28, 10 a. m., the patient's condition was as follows: Temperature 99, pulse 120, respiration 32 and quite superficial. Patient was conscious at times; very weak. A small quantity of urine passed, found to contain albumen 10 per cent per volume.

At this time 15 c. c. of the serum were injected subcutaneously, after having carefully disinfected the skin. At 11 a. m. the respiration became deeper, pulse stronger and fuller, temperature 99.6. Patient very thirsty. The oedema caused by the injection had entirely disappeared. At 2.30 p. m. another dose of 15 c. c. given; condition about the same; temperature 100, pulse 130, respiration 32; respiration deeper, pulse stronger; considerable expectoration. At 9 p. m. another dose of 15 c. c. given. At the time of the injection the skin over the face had become very dry, hard, and bleached, the skin in its texture resembling very much the appearance of an elephant hide. Temperature 99, pulse 120, respiration 28 and shallow; expectoration free and tinged with blood.

On the morning of the 29th another dose of the serum was given, the temperature 98, pulse 130, respiration 32. No urine passed during the past twelve hours.

The patient growing weaker—died on the morning of the 31st. No post mortem.

The total quantity of serum injected was 60 c. c.

CASE II. Negro; male; 20 years old; well developed, of strong constitution. Ad-

mitted to the smallpox hospital on January 5 under the diagnosis of variola. The eruption had appeared about five days before and covered the arms, chest, body, and legs. His temperature (axillary) on admission was 99.6° F., pulse 98, and respiration 24. Had considerable bronchitis.

At 11 a. m. of the same day the patient was given 15 c. c. of the serum subcutaneously, injected at a point about 1½ inches below the nipple. During the process of the injection the patient became very much frightened, but experienced little, if any, pain. The urine on examination showed 8 per cent of albumen per volume. One hour after the injection the temperature registered 100.8, pulse 88, strong, respiration 24, and deeper. At 5 p. m. of the same day 15 c. c. of the serum were injected. Temperature 102, pulse 90, full and strong, respiration deep and full; expectorating freely. 6 p. m., temperature 100.8, pulse 96, respiration 30. January 6, temperature 102.2, pulse 92, full and strong; respiration 24, of good depth. The patient complained of soreness at the point of injection.

Quite a notable change occurred in the pustules, which appeared to be losing their moist character, having an inspissated appearance, and quite a number of very small new pustules appeared in the healthy skin.

3 p. m. Patient in a profuse perspiration; temperature 99.4, pulse 88, respiration 28; urine showed a marked decrease in the quantity of albumen. Thirty c. c. of the serum were administered. About one-half hour after this injection the patient complained of a difficulty in breathing. This passed off in the course of an hour.

9 p. m. Another dose of 30 c. c. was given; this produced no ill effects; temperature 102, pulse 100, respiration 26, albumen present but in smaller quantity. On the following day there was a marked change in the eruption—all the former pustules now drying up—the smaller ones, which had appeared the previous day, appeared to have aborted. The general condition of the patient more favorable.

No further treatment was given. This case is convalescent.

During a period of forty-eight hours 105 c. c. of the serum were given.

On January 16 the scabs were becoming detached from the skin, and presented a very favorable appearance. There were no indications that there would be any pitting, whereas two other cases, not receiving the serum, to all appearances identical with this one, will be badly marked.

#### Dr. Elliot says:

It is very unfortunate that cases did not present themselves until the variolous eruption was well developed into pustular stage, since it is before this period of the disease that the serum would have an opportunity to show its full effect. As it is, I believe the use of the serum in these 2 cases has given good results. The injections were given under the most careful aseptic precautions, care being taken to inject the serum at a place where there were but few pustules. The effect of the serum upon the pulse tends to increase its volume; there is also what appears to be a slight rise in the temperature. Its effect upon the quantity of albumen in the urine was quite apparent after the second injection. The change in the appearance of the pustular eruption was noticeable after the first eighteen hours.

There was no effect on the eruption in the first case. It is my opinion that the vaccine serum will shorten the course of variola if given in the papular stage of the eruption. The vaccine serum does modify the variolous eruption, even in the pustular stage, but does not shorten the attack. The most serious objection to its application is the largeness of the dose, 15 to 30 c. c., which leads the patients to object to its use.

I hope this memorandum of the cases will be of service to you in your further experiments. Should other cases present I will adopt the serum treatment if possible.

Yours, very truly,

LEWELLYN ELLIOT, M. D.

From the history of the two cases treated with the serum, it appears that it does have a modifying effect upon the disease, especially upon the eruption (Case II).

I am informed by Dr. Elliot that it was his belief that by administering the serum to the first case life was prolonged at least seventy-two hours.

Since it appears possible to modify the pustular stage of smallpox, and in this case have little or no pitting follow, it certainly appears reasonable to assume that it would have even yet a greater power over the disease in its first stages.

Since it seems possible to mitigate the attack of variola, it also appears rational to presume that the serum would have power to render suscep-

tible persons refractory to the disease. It is intended to pursue my investigations on these lines and incorporate the results of my experiments in a forthcoming communication.

Very respectfully submitted,

J. J. KINYOUN,  
*Passed Assistant Surgeon, M. H. S.*

*Smallpox in New York City.*

NEW YORK, January 11, 1895.

DEAR SIR: The number of cases of and deaths from smallpox reported for the week ending January 5, 1895, was as follows: Cases reported, 5; deaths reported, none.

Very respectfully,

EMMONS CLARK,  
*Secretary Health Department.*

NEW YORK, January 14, 1895.

DEAR SIR: The number of cases of and deaths from smallpox reported for the week ending January 12, 1895, is as follows: Cases reported, 6; deaths reported, 1.

Very respectfully,

EMMONS CLARK,  
*Secretary Health Department.*

*Smallpox in Pennsylvania—Diphtheria in Philadelphia.*

PHILADELPHIA, January 10, 1895.

DEAR SIR: The smallpox status in this State is as follows: Philadelphia, number of cases reported since January 1, 1895, 23; number of deaths reported since January 1, 1895, 3. Nazareth, Northampton County, number of cases reported since January 1, 1895, 2; origin, Philadelphia. Pittsburg, Allegheny County, 1 case; Ashbourne, Montgomery County, 4 cases. Number of cases of diphtheria reported in Philadelphia since January 1, 1895, 108; number of deaths, 42.

Yours, very truly,

BENJAMIN LEE, M. D.,  
*Secretary State Board of Health.*

*Smallpox in Wisconsin.*

MILWAUKEE, January 7, 1895.

SIR: The following concerning smallpox in this State has been reported at this office during the week ending Saturday, January 5: Chippewa Falls, Chippewa County, 1 case; Manitowoc Rapids Township, Manitowoc County, 1 case; Mishicott, Manitowoc County, 6 cases; Milwaukee, Milwaukee County, 17 cases; 2 deaths. Total number of cases on hand in Milwaukee: Eleventh Ward Hospital, 18; Eighteenth Ward Hospital, 9; at homes, 41; total, 68.

Very truly, yours,

U. O. B. WINGATE,  
*Secretary State Board of Health.*

*Smallpox in Illinois.*

SPRINGFIELD, January 9, 1895.

SIR: It becomes my duty to inform you that from January 1 to date the following cases of smallpox have been reported to this office: Kirk-

land, DeKalb County, 1 case; Olney, Richland County, 1 case; Winnetka, Cook County, 4 cases; and Quincy, Adams County, 1 case.

Very truly, yours,

J. W. SCOTT, M. D.,  
Secretary State Board of Health.

*Smallpox in the United States as reported to the Supervising Surgeon-General Marine-Hospital Service, November 22, 1894, to January 15, 1895.*

Places.	Date.	Cases.	Deaths.	Remarks.
Connecticut:				
Groton.....	Dec. 5.....	1		
District of Columbia:				
Washington.....	Oct. 18-Jan. 17.....	43	9	
Illinois:				
Chicago.....	Nov. —.....		51	
Kirkland.....	Jan. 1-Jan. 9.....	1		
Olney.....	.....do.....	1		
Quincy.....	.....do.....	1		
Sandwich.....	Nov. 7-Dec. 10.....	15		
Winnetka.....	Jan. 1-Jan. 9.....	4		
Michigan:				
Adrian Township.....	Nov. 23.....	1	1	
Bengal Township.....	Jan. 5.....	1		
Chester.....	Dec. 10.....	1		
Danby Township.....	Jan. 5.....			Smallpox reported.
Detroit.....	Dec. 1-Jan. 12.....	46	15	
Manchester Township.....	Jan. 2.....			Do.
Marquette.....	Dec. 10.....	1		
Plymouth Township.....	Jan. 1.....	1		
Royal Oak Township.....	Jan. 5.....			Do.
Sebewa Township.....	Jan. 2.....			Do.
Southfield Township.....	Dec. 30.....	1		
St. Johns Township.....	Jan. 2.....			Do.
Watersmeet Township.....	.....do.....			Do.
New Jersey:				
Paterson.....	Dec. 10.....	2		
New York:				
Brooklyn.....	Nov. 24-Dec. 8.....	3		
	Dec. 22-Jan. 5.....		2	
New York.....	Nov. 24-Jan. 12.....	47	5	
Ohio:				
Cincinnati.....	Nov. 23.....	1		
Deerfield.....	Nov. 5-Dec. 1.....	4		
Mansfield.....	Jan. 4.....	1		
Millersport.....	.....do.....	2		
Toledo.....	.....do.....	1		
Pennsylvania:				
Ashbourne.....	Jan. 1-Jan. 10.....	4		
Avondale, Chester Co.....	Dec. 18-Jan. 1.....	1		
Nazareth, Northampton Co.....	Dec. 18-Jan. 10.....	3		
Philadelphia.....	Nov. 24-Dec. 1.....	7	1	
	Dec. 18-Jan. 10.....	48	7	
Pittsburg.....	Jan. 1.....	1		
Vermont:				
Washington.....	Dec. 15-Dec. 25.....	2		
Virginia:				
Nomini.....	Dec. 27.....	5		
Wisconsin:				
Chippewa Falls.....	Dec. 28-Jan. 5.....	1		
Fond du Lac.....	Dec. 10-Dec. 17.....	1		
	Dec. 22-Dec. 29.....	3		
Greenfield.....	.....do.....	3	1	
Manitowoc Rapids.....	Dec. 28-Jan. 5.....	1		
Mishecott.....	.....do.....	6		
Milwaukee.....	Oct. 6-Dec. 24.....	426	142	
	Dec. 22-Jan. 5.....	37	7	
Rhineland.....	Dec. 3-Dec. 24.....	2	1	
Two Rivers.....	Oct. 22-Dec. 10.....	14	4	
Wauwatosa.....	Dec. 10-Dec. 24.....	3		



*Report of immigration at New York for the week ended January 12, 1895.*OFFICE OF U. S. COMMISSIONER OF IMMIGRATION,  
*Port of New York, January 14, 1895.**Number of alien immigrants who arrived at this port during the week ended January 12, 1895; also names of vessels and ports from which they arrived.*

Date.	Vessel.	Where from.	No. of immigrants from Russia.	No. of immigrants.
1895.				
Jan. 7	Steamship Aurania .....	Liverpool and Queenstown...		115
Do..	Steamship La Champagne.....	Havre .....	1	75
Jan. 9	Steamship Noordland.....	Antwerp .....	2	114
Do...	Steamship Teutonic .....	Liverpool and Queenstown...	7	110
Do...	Steamship Maasdam .....	Rotterdam and Boulogne .....	35	100
Jan. 10	Steamship Furnessia.....	Glasgow .....	17	52
Do...	Steamship Olinda.....	Lisbon and The Azores.....		18
Jan. 12	Steamship Elbe.....	Bremen .....	19	138
Do...	Steamship Weser .....	do.....	84	204
Do...	Steamship Paris.....	Southampton.....	3	214
Do...	Steamship Umbria.....	Liverpool and Queenstown .....		61
	Total .....		168	1,201

Dr. J. H. SENNER,  
*Commissioner of Immigration.*

## VESSELS REMAINING, ARRIVING AT, AND DEPARTING FROM UNITED STATES QUARANTINE STATIONS.

## DELAWARE BREAKWATER QUARANTINE.

*Week ended January 12, 1895.*

Three vessels inspected and passed.

## REEDY ISLAND QUARANTINE.

*Week ended January 6, 1895.*Fourteen vessels inspected and passed.  
One vessel spoken and passed.*Week ended January 13, 1895.*

Nineteen vessels inspected and passed.

## SAN DIEGO QUARANTINE.

*Week ended January 2, 1895.*

Two vessels inspected and passed.

*Week ended January 9, 1895.*One vessel inspected and passed.  
One vessel spoken and passed.

## SOUTH ATLANTIC QUARANTINE.

*Week ended January 12, 1895.*

Two vessels inspected and passed.

*Report of States and Yearly and Monthly Reports of Cities.*CALIFORNIA—*Alameda*.—Month of December, 1894. Estimated population, 14,000. Total deaths not reported. One death from phthisis pulmonalis.*Los Angeles*.—Estimated population, 75,000. Total deaths, 109, including phthisis pulmonalis, 17; enteric fever, 3; and croup, 3.

*Sacramento.*—Month of December, 1894. Estimated population, 30,000. Total deaths, 35, including phthisis pulmonalis, 4; enteric fever, 4; and diphtheria, 1.

CONNECTICUT—*Bridgeport.*—Month of December, 1894. Estimated population, 58,860. Total deaths, 76, including phthisis pulmonalis, 13; diphtheria and croup, 7; and whooping cough, 1.

*Hartford.* Month of December, 1894. Estimated population, 57,500. Total deaths, 71, including phthisis pulmonalis, 7; enteric fever, 2; scarlet fever, 1; and croup, 3.

FLORIDA—*Tampa.*—Month of December, 1894. Estimated population, 16,000. Total deaths, 19, including phthisis pulmonalis, 4; and enteric fever, 1.

GEORGIA—*Columbus.*—Month of December, 1894. Estimated population, white, 10,276; colored, 9,027; total, 19,303. Deaths, white, 10; colored, 13; total, 23, including 2 from phthisis pulmonalis.

ILLINOIS—*Galesburg.*—Quarter ended December 31, 1894. Estimated population, 20,000. Total deaths, 54, including phthisis pulmonalis, 5; and enteric fever, 5.

INDIANA—*Columbus.*—Year of 1894. Population, 6,719. Total deaths, 97. No deaths from contagious diseases reported.

IOWA—*Davenport.*—Month of December, 1894. Estimated population, 35,500. Total deaths, 36, including phthisis pulmonalis, 4; enteric fever, 1; diphtheria, 2; and croup, 3.

*Dubuque.*—Month of December, 1894. Population, 40,000. Total deaths, 48, including phthisis pulmonalis, 4; diphtheria, 1; croup, 4; and whooping cough, 1.

*Keokuk.*—Month of December, 1894. Estimated population, 18,000. Total deaths, 15, including 2 from phthisis pulmonalis.

KENTUCKY—*Louisville.*—Month of December, 1894. Estimated population, 200,000. Total deaths, 294, including phthisis pulmonalis, 39; enteric fever, 4; diphtheria, 22; croup, 8; and whooping cough, 1.

MAINE—*Portland.*—Four weeks ended December 29, 1894. Estimated population, 40,000. Total deaths, 62, including phthisis pulmonalis, 8; enteric fever, 1; diphtheria, 6; and whooping cough, 2.

MARYLAND—*Baltimore.*—Month of December, 1894. Estimated population, white, 384,394; colored, 71,033; total, 455,427. Deaths, white, 558; colored, 194; total, 752, including phthisis pulmonalis, 101; enteric fever, 23; scarlet fever, 5; diphtheria, 42; croup, 4; and whooping cough, 8.

MASSACHUSETTS.—*Northampton.*—Month of December, 1894. Estimated population, 16,400. Total deaths, 22, including phthisis pulmonalis, 2; enteric fever, 2; and scarlet fever, 1.

MICHIGAN.—Week ended January 5, 1895. Reports to the State board of health from 54 observers indicate that inflammation of kidney and pneumonia increased, and that puerperal fever and remittent fever decreased, in area of prevalence. Phthisis pulmonalis was

reported present during the week at 228 places, scarlet fever at 49, diphtheria at 36, enteric fever at 24, measles at 7, and smallpox at 11 places—Bengal Township, Chester Township, Detroit, Danby Township, Marquette, Plymouth, Royal Oak Township, Sebewa Township, St. Johns, Smithfield Township, and Watersmeet Township.

*Flint*.—Year of 1894. Population, 9,803. Total deaths, 143, including phthisis pulmonalis, 9; enteric fever, 2; diphtheria, 4; and scarlet fever, 2.

MINNESOTA—*St. Paul*.—Month of December, 1894. Estimated population, 155,000. Total deaths, 157, including phthisis pulmonalis, 8; enteric fever, 4; diphtheria, 8; croup, 7; and whooping cough, 2.

*Winona*.—Month of December, 1894. Estimated population, 22,000. Total deaths, 20, including 4 from phthisis pulmonalis.

MISSOURI.—*Kansas City*.—Month of December, 1894. Population, 132,716. Total deaths, 106, including phthisis pulmonalis, 3; diphtheria, 6; and croup, 4.

*St. Louis*.—Month of December, 1894. Estimated population, 540,000. Total deaths, 663, including phthisis pulmonalis, 65; enteric fever, 7; scarlet fever, 2; diphtheria, 38; croup, 30; and whooping cough, 2.

NEW HAMPSHIRE.—*Concord*.—Month of December, 1894. Estimated population, 19,000. Total deaths, 32, including phthisis pulmonalis, 1; and scarlet fever, 1.

NORTH CAROLINA.—Month of November, 1894. Reports to the State board of health from 30 towns, having an aggregate population of 147,454; white, 86,600; colored, 68,504; show a total of 130 deaths, white, 60; colored, 70. The deaths include phthisis pulmonalis, 12; enteric fever, 3; diphtheria, 2; and whooping cough, 2.

TENNESSEE.—*Chattanooga*.—Month of December, 1894. Population, white, 27,000; colored, 13,000; total, 40,000. Deaths, white, 18; colored, 17; total, 35, including phthisis pulmonalis, 3; enteric fever, 2; croup, 1; and whooping cough, 1.

*Knoxville*.—Month of December, 1894. Estimated population, 40,358. Total deaths, 64, including phthisis pulmonalis, 9; enteric fever, 2; measles, 4; and croup, 2.

TEXAS.—*Laredo*.—Month of October, 1894. Estimated population, 11,340. Total deaths, 24, including 2 from phthisis pulmonalis.

Month of November, 1894. Total deaths, 19, including phthisis pulmonalis, 3; and enteric fever, 1.

Month of December, 1894. Total deaths, 19, including phthisis pulmonalis, 2; and diphtheria, 1.

VIRGINIA.—*Lynchburg*.—Month of December, 1894. Estimated population, 30,000. Total deaths, 25, including 4 from phthisis pulmonalis.

#### PUBLICATIONS RECEIVED.

Fourth Report of the Colorado State Board of Health, 1892, 1893, 1894.  
Biennial Report of the Secretary of the State Board of Health of West Virginia, 1893-94.



## MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Population, U. S. Census of 1890.	Total deaths from all causes.	Deaths from—									
				Phthisis pulmonalis.	Yellow fever.	Smallpox.	Varicella.	Cholera.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
													Whooping cough.
Amesbury, Mass.	Jan. 12.	9,798	0										
Ashtabula, Ohio.	Jan. 5.	8,338	4										
Auburn, N. Y.	do.	25,858	10	12									
Augusta, Ga.	Jan. 11.	33,300	0										
Baltimore, Md.	Jan. 5.	434,439	145	14						4	3	11	1
Do.	Jan. 11.	434,439	224	127						5	3	8	1
Bath, Me.	Jan. 5.	8,723	2										
Battle Creek, Mich.	do.	13,197	4							1			
Bennington, Vt.	Jan. 12.	6,391	1										
Beverly, Mass.	Jan. 5.	10,821	2										
Do.	Jan. 12.	10,821	10	1									
Boston, Mass.	do.	448,477	240	26						1	5	19	1
Bristol, Conn.	Jan. 5.	7,382	0										
Do.	Jan. 12.	7,382	2										
Bristol, R. I.	Jan. 5.	5,478	2										
Brockton, Mass.	do.	27,294	13	2									
Brookline, Mass.	do.	12,103	5										
Brooklyn, N. Y.	Jan. 12.	806,343	503	55						2	2	22	1
Bucyrus, Ohio.	Jan. 5.	5,974	4	1						2			
Burlington, Vt.	Dec. 29.	14,590	0										
Do.	Jan. 5.	14,590	0										
Butler, Pa.	Jan. 12.	8,734	2										
Butte, Mont.	Jan. 5.	10,723	4	2									
Charleston, S. C.	do.	* 54,955	† 40	2						1			
Cincinnati, Ohio.	Jan. 11.	296,908		15						6		5	
Claremont, N. H.	Jan. 5.	5,565	2										
Cleveland, Ohio.	do.	261,353	103	10						2	17	2	
Columbus, Ind.	do.	6,719	3									1	
Columbus, Ohio.	Dec. 29.	88,150	29	3								3	
Council Bluffs, Iowa.	Jan. 5.	21,474	4									1	
Cumberland, Md.	Jan. 12.	12,729	6									2	
Dayton, Ohio.	Jan. 10.	61,220	32	2									
Dedham, Mass.	Dec. 29.	7,123	5										
Do.	Jan. 5.	7,123	1										
Dunkirk, N. Y.	do.	9,416	3									2	
Elgin, Ill.	Jan. 4.	17,823	8	1									
Erie, Pa.	Dec. 29.	40,634	12	2								1	
Do.	Jan. 5.	40,634	17	3						2		1	
Fall River, Mass.	Jan. 12.	74,398	30	2						2			
Fitchburg, Mass.	Jan. 5.	22,037	11	1									
Flint, Mich.	do.	9,803	2										
Fort Worth, Tex.	do.	23,076	6	2									
Grand Rapids, Mich.	Jan. 12.	60,278	23	3								1	
Greenville, Miss.	Jan. 5.	5,473	4										
Haverhill, Mass.	Jan. 12.	27,412	6	1									1
Hoboken, N. J.	Jan. 5.	43,648	23	1								1	
Jamestown, N. Y.	do.	16,038	6										1
Johnstown, N. Y.	do.	7,768	1										
Johnstown, Pa.	do.	21,805	9										
Kalamazoo, Mich.	do.	17,853	3										
Keokuk, Iowa.	Jan. 10.	14,101	7										
Knoxville, Tenn.	Jan. 5.	22,535	14	3									1
Lebanon, Pa.	do.	14,664	3									1	
Lowell, Mass.	Jan. 12.	77,696	39	4						1	1	3	
Ludington, Mich.	Jan. 5.	7,517	2										
Lynchburg, Va.	do.	19,709	10	2									
McKeesport, Pa.	do.	20,741	5										
Manitowoc, Wis.	Dec. 10.	7,710	1										
Do.	Dec. 17.	7,710	2										
Do.	Dec. 24.	7,710	1										
Massillon, Ohio.	Jan. 5.	10,092	2							1		1	
Michigan City, Ind.	do.	10,776	5									2	
Middletown, Ohio.	do.	7,681	0										
Milford, Mass.	Jan. 7.	8,780	4										
Minwaukee, Wis.	Jan. 5.	204,468	79	7	2					3		6	2
Minneapolis, Minn.	do.	164,738	43	5						1	1	1	
Do.	Jan. 12.	164,738	58	3							1	1	
Mobile, Ala.	Jan. 11.	31,076	18	3									1
Mount Vernon, N. Y.	Jan. 5.	10,830	5	1									
Nashville, Tenn.	do.	76,168	33	5							2		
Do.	Jan. 12.	76,168	37	5							4		
Naugatuck, Conn.	Jan. 5.	6,218	1										
Do.	Jan. 12.	6,218	1										

\* Estimated population, white, 28,870; colored, 36,295. Total, 65,165. † White, 10; colored, 30.



Table of temperature and rainfall, week ended January 7, 1895.

[Received from Department of Agriculture, Weather Bureau.]

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Deficiency.	Normal.	Excess.	Deficiency.
<b>Atlantic Coast:</b>						
Eastport, Me.....	22		2	.91		.13
Portland, Me.....	22		5	.77		.56
Northfield, Vt.....	17		7	.88		.49
Boston, Mass.....	28		3	.92		.48
Block Island, R. I.....	33		3	.98		.24
New London.....	31		3	.98	.17	
Albany, N. Y.....	26		8	.63		.23
New York, N. Y.....	32		4	.84		.01
Philadelphia, Pa.....	33		4	.73		.16
Atlantic City, N. J.....	33		4	.91		.64
Baltimore, Md.....	35		5	.70		.42
Washington, D. C.....	34		4	.72		.54
Lynchburg, Va.....	35		2	.91		.80
Norfolk, Va.....	40		1	.84		.84
Charlotte, N. C.....	39		1	1.17		1.03
Wilmington, N. C.....	45		3	.86		.81
Charleston, S. C.....	48		3	.91		.65
Augusta, Ga.....	47		4	.94		.68
Savannah, Ga.....	49		3	.84		.65
Jacksonville, Fla.....	52		1	.77		.60
Titusville, Fla.....	61		5	.56		.56
Jupiter, Fla.....	67		5	.61		.54
Key West, Fla.†.....						
<b>Gulf States:</b>						
Atlanta, Ga.....	41		2	1.22		.98
Mobile, Ala.....	51		2	1.11		.49
Montgomery, Ala.....	48	0		1.12		.54
Vicksburg, Miss.....	44	5		1.19	.48	
New Orleans, La.....	53	1		1.21		.51
Shreveport, La.....	43	4		1.11		.85
Fort Smith, Ark.....	37		1	.52	.11	
Little Rock, Ark.....	40	1		1.05	2.02	
Palestine, Tex.....	42	8		.93		.65
Galveston, Tex.....	52	5		.92		.77
San Antonio, Tex.†.....						
Corpus Christi, Tex.....	50	12		.79		.79
<b>Ohio Valley and Tennessee:</b>						
Memphis, Tenn.....	36	6		1.17		.38
Nashville, Tenn.....	36	1		1.10	.96	
Knoxville, Tenn.....	37		3	1.23		.35
Louisville, Ky.....	32	2		.91	.86	
Indianapolis, Ind.....	28	0		.70	.29	
Cincinnati, Ohio.....	32		1	.77	3.34	
Columbus, Ohio.....	28		1	.77	1.25	
Parkersburg, W. Va.....	32		2	.70	1.08	
Pittsburg, Pa.....	30		2	.70	.64	
<b>Lake Region:</b>						
Oswego, N. Y.....	25		5	.70		.20
Buffalo, N. Y.....	26		1	.69		.13
Erie, Pa.....	29		1	.77		.43
Cleveland, Ohio.....	26		2	.56		.19
Toledo, Ohio.....	27		2	.49		.37
Detroit, Mich.....	27		3	.52		.35
Port Huron, Mich.....	23	0		.49		.35
Alpena.....	19	0		.56		.42
Marquette, Mich.....	18		4	.41		.13
Grand Haven, Mich.....	25		2	.56		.06
Milwaukee, Wis.....	20		1	.49		.38
Chicago, Ill.....	24		3	.49		.30
Duluth, Minn.....	11		2	.28		.15
<b>Upper Mississippi Valley:</b>						
St. Paul, Minn.....	12		2	.27	.11	
La Crosse, Wis.....	16		2	.32		.27
Davenport, Iowa.....	20		1	.35		.27
Des Moines, Iowa.....	19	0		.35		.36
Keokuk, Iowa.....	21	3		.42		.40
Springfield, Ill.....	26	0		.52		.44
Cairo, Ill.....	33	3		.87	.36	
St. Louis, Mo.....	28	2		.49		.02
<b>Missouri Valley:</b>						
Springfield, Mo.....	31	1		.49		.04
Kansas City, Mo.....	28	1		.21		.16
Wichita, Kans.....	30		1	.32		.22

\* The figures in these columns represent the average daily departure.

† Report missing.

Table of temperature and rainfall, week ended January 7, 1895—Continued.

Locality.	Temperature in degrees Fahrenheit.			Rainfall in inches and hundredths.		
	Normal.	*Excess.	*Deficiency	Normal.	Excess.	Deficiency.
<b>Missouri Valley—Continued.</b>						
Concordia, Kans.....	25		2	.21		.19
Omaha, Nebr.....	20	0		.20		.14
Valentine, Nebr.....	17		1	.14	.07	
Huron, S. Dak.....	10		1	.14	.57	
Pierre, S. Dak.....	11		1	.14	.06	
Moorehead, Minn.....	3		1	.21		.17
St. Vincent, Minn.....	2		3	.15	.12	
Bismarck, N. Dak.....	6		5	.14	.04	
Williston, N. Dak.....	4		5	.14		.12
<b>Rocky Mountain Slope:</b>						
Havre, Mont.....	7		10	.21		.07
Helena, Mont.....	18		14	.28	.39	
Spokane, Wash.....	25		1	.63	.37	
Walla Walla, Wash.....	33		6	.49	.22	
Winnemucca, Nev.....	28	3		.28		.12
Salt Lake City, Utah.....	30	4		.35		.25
Cheyenne, Wyo.....	25	0		.07		.07
North Platte, Nebr.....	21		1	.14		.14
Denver, Colo.....	29		3	.14		.14
Pueblo, Colo.....	30		4	.07	.05	
Dodge City, Kans.....	26		2	.14		.06
Abilene, Tex.....	39	10		.21		.21
Santa Fe, N. Mex.....	28	1		.07	.10	
El Paso, Tex.....	40	10		.14	.18	
Tucson, Ariz.....	54	0		.07		.07
<b>Pacific Coast:</b>						
Port Angeles, Wash.....	36		3	1.28	.60	
Portland, Oreg.....	39		4	1.74	3.08	
Roseburg, Oreg.....	42		1	1.54	.91	
Red Bluff, Cal.....	45		1	1.12	.12	
Sacramento, Cal.....	46	0		.91	1.77	
San Francisco, Cal.....	50		1	1.19	.98	
Fresno, Cal.....	44	1		.35	1.26	
Los Angeles, Cal.....	54		2	.72	.31	
San Diego, Cal.....	55		2	.47	.22	
Yuma, Ariz.....	54	0		.07		.17

\* The figures in these columns represent the average daily departure.

## FOREIGN.

[Reports received from the United States consuls through the Department of State and from other sources.]

*Cholera and yellow fever as reported to the Supervising Surgeon-General M. H. S., January 4, 1895, to January 15, 1895.*

## CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
<b>Austria-Hungary:</b>				
Galicia.....	Dec. 3-Dec. 16....	420	228	*Cholera reported.
Belgium.....	Nov. 18-Nov. 24....	3		
Brazil.....	Dec. 11.....			
Germany.....	Dec. 10-Dec. 24....	2	1	
Holland.....	Dec. 8.....	7		
<b>India:</b>				
Bombay.....	Dec. 11-Dec. 18....		2	
Calcutta.....	Nov. 17-Dec. 8....		50	
Madras.....	Dec. 7-Dec. 14....		3	
<b>Russia:</b>				
Archangel.....	Oct. 28-Nov. 3....	4	3	
Baku.....	Nov. 4-Nov. 10....	1	1	
Bessarabia.....	Nov. 11-Nov. 17....	13	5	
Ekaterinoslav.....	.....do.....	11	7	
Kiev.....	.....do.....	35	21	
Kovno.....	.....do.....	27	14	
Kurland.....	Nov. 4-Nov. 10....	2	1	
Lublin.....	Nov. 3-Nov. 9....	10	1	
Minsk.....	Nov. 16-Nov. 24....	13	3	
Pern.....	Nov. 4-Nov. 10....	10	6	
Petrikov.....	Dec. 4-Dec. 9....	3	2	
Podolia.....	Nov. 11-Nov. 17....	475	202	
Pskov.....	Nov. 16-Nov. 24....	4	1	
Riasan.....	Nov. 4-Nov. 17....	13	7	
Saratov.....	Nov. 11-Nov. 17....	2	1	
Taurien.....	Nov. 4-Nov. 17....	55	31	
Tchernigov.....	.....do.....	45	14	
Tiflis.....	Nov. 4-Nov. 10....	3	3	
Volhynia.....	.....do.....	3	2	
Wilna.....	Nov. 11-Nov. 24....	25	9	
Witebst.....	Nov. 18-Nov. 24....	6	3	
Yaroslav.....	Nov. 11-Nov. 17....	11	1	

## YELLOW FEVER.

<b>Brazil:</b>				
Rio de Janeiro.....	Dec. 1-Dec. 8....		2	
Santos.....	Nov. 23-Dec. 8....		1	
Cuba.....	Dec. 20-Jan. 3....	25	10	
<b>Mexico:</b>				
Vera Cruz.....	Dec. 27-Jan. 3....		2	
Salvador.....	Dec. 9-Dec. 24....		7	
Puerto Rico.....	Nov. 21-Dec. 5....		3	

\* Towns Cachocira, Cruzeiro; Campo Bello, Barra; Reyende, Quelenz, and Volta Redondo.

*Status of Infectious Diseases in Europe and Asia.*

(Translated from the Kaiserlichen Gesundheitsamtes, and transmitted to this office from Berlin by Passed Assistant Surgeon G. T. Vaughan, M. H. S.)

## CHOLERA.

*German Empire.*—From December 10 to 17, midday, there was 1 case of cholera each reported from Wilhelmsrode (district Labiau), and from Zaborze (district Zabrze); the first was fatal.



*Austria-Hungary.*—In Galicia, from December 3 to 9, 243 cases of cholera and 136 deaths were reported, according to the following table:

District.	Parishes.	Cases.	No. of deaths.
Krakau (and vicinity).....	1	3	1
Lemberg (and vicinity).....	2	10	5
Boorka.....	1	7	4
Borszczow.....	13	52	31
Brody.....	1	2	
Brezczany.....	1	1	
Buczacz.....	5	34	17
Czortkow.....	6	21	7
Husiatyn.....	4	11	8
Kosow.....	1		2
Nadworna.....	1	1	
Podhajce.....	2	2	1
Rohatyn.....	1	3	1
Skalat.....	7	60	35
Stanislaw.....	2	6	1
Tarnopol.....	2	15	11
Trembowla.....	4	7	4
Zaleszczyki.....	3	4	5
Zloczow.....	4	4	4

*Belgium.*—For the week from November 18 to 24 3 cases were reported from Jupille (province of Liege) as supplementary, having occurred on November 16 and 17.

*Netherlands.*—According to report of December 8 the disease has just recently appeared in south Holland. In Lissersbroek, 1 case; in Kondekerk, on the Rhine, 4 cases; and in Kralingen (suburb of Rotterdam), 2 cases.

According to the Staatskourant of December 13, 65 persons died of Asiatic cholera in September, this year, and 12 of cholera nostras.

*Russia.*—Official reports give the following: In the government of Perm, from November 4 to 10, 10 cases, 6 deaths; of Rjason, from November 4 to 17, 13 cases, 7 deaths; Jaroslaw and Saratow, from November 11 to 17, 11 cases, 1 death, and 2 cases, 1 death, respectively; Pskow, from November 11 to 24, 4 cases, 1 death; Minsk, from November 16 to 24, 13 cases, 3 deaths; Witebsk, from November 18 to 24, 6 cases, 3 deaths; Petrikov, from December 4 to 9, 3 cases, 2 deaths; and Lublin, from December 3 to 9, 10 cases, 1 death.

According to official information in No. 313 of the St. Petersburg Zeitung of November 21, there have been sick of cholera in St. Petersburg from June 19 to October 10, 3,978 of the inhabitants, of whom 1,999 died; besides, there were 161 cases, 54 deaths, of persons on vessels, and 91 cases, 21 deaths, of strangers from abroad. In the four suburbs of the city there were 908 cases, 362 deaths, besides 253 cases, 107 deaths, were treated in the hospitals of the chief city. The height of the epidemic was reached in the first days of July; from the 1st to 11th of this month there were daily, respectively, 172, 218, 158, 196, 209, 197, 198, 182, 152, 144, and 151 cases. After July 20 the number of cases no longer reached 50, after August 27 no longer 20, and after September 4 no longer 10 in any day. The last case was on the 6th of October, and the last death on the 10th of the same month.

Locally the cases of sickness and the deaths were distributed: In the Admiralty section of the city, 63 cases, 30 deaths; in the Kasanchen, 96 cases, 43 deaths; in Spasski, 382 cases, 237 deaths; in Kolomna, 183 cases, 87 deaths; in Norvschen, 397 cases, 213 deaths; in the Moscow section, 410 cases, 210 deaths; in the Alexander-Newski section, 579 cases, 328 deaths; in the Roshdestwenski, 461 cases, 214 deaths; in the

Liteini, 191 cases, 95 deaths; in the Wassili-Ostiw, 375 cases, 159 deaths; in the Petersburg, 404 cases, 171 deaths; and in the Wiborger section, 437 cases, 212 deaths. The greatest mortality figures in proportion to population were in the Alexander-Newski section, 28.1, 39.7, and 51.9, respectively, in 10,000 in the three districts; in the Wiborger section, 29.4, 44.7, and 41.7, respectively; in the third district of the Norvschen section, 37.5; in the third district of the Spasski section, 35.6; in the second and third districts of the Roshdestwenski section, 32.6 and 36.3; and finally, in the third district of the Petersburg section, 30.3. Wherever the mortality has exceeded the average of 23.1 in 10,000 over the entire city, the causes were improper supply, want of filtration of Neva water, or generally of the conduit water, as in the Alexander-Newski and Wiborger sections, or great density of population, as in the Spasski section.

*Turkey.*—In Constantinople, on November 30, a suspicious case of sickness was observed. In the vilayet Hudavendkjar, in Sandsehok Ismid, there were separate cases of cholera in 3 villages about the middle of November, but since the 20th no cases have occurred.

Cholera was imported into the city of Adalia by the arrival of 1,000 troops from Anatolia; from November 29 to December 3, 44 persons were taken sick there and 24 died. December 3, cholera was reported in a region of vilayet Adana. In Diarbekir, from November 28 to December 2, the number of cases was 18, deaths, 10.

*East Indies—Calcutta.*—From October 21 to 27, 8 persons died of cholera, 2 of smallpox, and 176 of fevers.

#### SMALLPOX.

In Constantinople, according to news of December 4, an increasing and widespread epidemic of smallpox is raging. From October 13 to November 13, 120 persons died of the disease—that is, one eighth of all the deaths in Constantinople during this time. Edinburgh and Dublin each 6 deaths of smallpox, Moscow, 3; Warsaw, 2; cases of the disease in Budapest, 3; Paris, 13; Edinburgh, 17; and St. Petersburg, 13.

#### TYPHUS FEVER.

Two cases in St. Petersburg.

#### MEASLES.

More than one-tenth of all deaths in Elbing, Mannheim, Portsmouth, and Stockholm occurred from measles. Average of all German reports of places 1881-1890, 1.30 per cent. Cases of measles have occurred: In Berlin, 118; in Breslau, 130; in the Government provinces of Arnsberg, 235; of Düsseldorf, 240; of Hildesheim, 105; of Lüneburg, 166; of Münster, 244; of Posen, 117; of Stettin, 266; of Wiesbaden, 112; in the city of Munich, 44; in Vienna, 454; Budapest, 91; Edinburgh, 82; Copenhagen, 146; and Stockholm, 174.

#### DIPHThERIA, CROUP, AND SCARLETINA.

Deaths from diphtheria and croup (German average 1881-1890, 4.49 per cent) in Bochum, Brandenburg, Gera, Kassel, Metz, Zwickau, and Christiania were more than one tenth of the total mortality. Cases of diphtheria and croup have occurred: In Berlin, 164; in the Government provinces of Arnsberg, 126; of Düsseldorf, 143; in Hamburg, 46; Munich, 41; Vienna, 90; Budapest, 27; Paris, 89; Copenhagen, 78; Stockholm, 31; St. Petersburg, 66. Of scarletina, in Berlin, 79; Breslau, 38; Vienna, 75; Edinburgh, 55; Copenhagen, 59; St. Petersburg, 52.

## REGULATIONS AGAINST CHOLERA.

*Prussia.*—The state commissioner for the district of the Vistula has issued the following notice :

NOVEMBER 29, 1894.—I hereby give notice that the sanitary police inspection established according to my instructions of April 1, 1893, and May 10, 1894, of commercial vessels in the district of the Vistula at all inspection places except those in the city of Tolckemit, is this day discontinued.

The state commissioner of the Munel-Pregel district has, by orders of December 16, discontinued the inspection service in the district of Lapsan from the 18th of the same month.

All river inspection stations in that district are now closed.

*Government District, Königsberg.*—The President, on November 20, issued the following police regulations, to be in force from that date :

The regulations of May 24, 1894, concerning the prohibition of the passing of persons from Russia over the Prussian border in the districts of Neidenburg and Ortelsburg, are hereby discontinued.

*Denmark.*—By ministerial proclamation of December 5 the sanitary police measures instituted against all Russian ports on the Gulf of Finland and the Baltic Sea, as well as all Netherland ports, have been abolished. However, the importation of rags and carding wool not disinfected according to directions is, in future, prohibited from Russia and Finland.

*Sweden.*—By order of the college of commerce December 13, the province of West Prussia was declared free from cholera from December 12, and the regulations of September 22, 1893, concerning travelers coming thence, are again in force.

*Norway.*—By Government order of December 13, the province of Posen, the Belgian province Liege, and the cities of Amsterdam and Rotterdam, are declared free from cholera.

*Turkey.*—News of December 4, to the effect that by the decision of the International Sanitary Council at Constantinople, quarantine on arrivals from vilayet Hudavendkjar and the Sandschok Ismid has been limited to twenty-four hours' observation ; also for caravan trains from Anatolia which have not stopped at the Station Ismid. The city of Ismid is still under a five days' quarantine. Special orders have been issued to prevent the introduction of cholera by the transportation of troops and recruits. By resolution of this council the quarantine against the ports from Ineboli to Eregli is limited to a medical inspection, for the district from Eregli to Schile, to twenty-four hours' observation.

*Greece.*—By imperial order of November 24 a five days' quarantine observation from November 21 has been established for vessels running between Cape Chelidonia and the port of Alaia, near Turkish ports. The vessels affected will undergo quarantine in those Greek ports where there is a sanitary authority, or in St. George in the Roads of Salamis. By order of November 28 a five days' quarantine inspection has been established from November 26 for vessels on the Black Sea running between Schile and Ineboli, near Turkish ports.

*Spain.*—By ministerial order of December 7 the quarantine inspection imposed June 26 on arrivals from Antwerp was discontinued under the usual conditions.

By imperial order of December 10 vessels from St. Louis, Senegambias must undergo quarantine. All ports distant less than 165 kilometer, from St. Louis are considered cholera-suspected.

*Portugal.*—By order of the minister of the interior, December 10, the ports of the Presidency of Bombay are declared clean since December 1.

## REGULATIONS AGAINST PLAGUE.

*Spain.*—By ministerial order of December 11 arrivals from Amoy, who have left there since December 4, are required to undergo a second quarantine observation of at least three days.

## REGULATIONS AGAINST SMALLPOX.

*Denmark.*—By order of December 5 the former sanitary police measures provided against vessels coming from London, or against those having had contact with such vessels, are discontinued.

## CANADA.

*Smallpox in Ontario.*

TORONTO, January 9, 1895.

SIR: I beg to make the following statement regarding the prevalence of smallpox in Ontario at the present time:

County.	Municipality.	Date of out-break.	Cases.		
			Total.	Still sick.	Deaths.
Kent.....	Ralugh Township.....	Nov. 29	1	1	0
Middlesex.....	Strathroy.....	Nov. 8	7	3	2
York.....	Toronto.....	Dec. 10	2	2	0
Elgin.....	St. Thomas.....	Dec. 9	1	0	1
Perth.....	Logan Township.....	Nov. 20	3	3	0
Middlesex.....	Komoka.....	Dec. 12	1	1	0
Perth.....	Elmo Township.....	Jan. 7	1	1	0
Essex.....	Sandwich.....	Jan. 7	1	1	0

I have the honor to be, sir, your obedient servant,

PETER H. BRYCE,  
*Secretary Provincial Board of Health.*

## GERMANY.

*Antitoxine Treatment in Diphtheria.*

BERLIN, January, 1895.

From March 15 to December 1, 1894, Dr. H. Kossel, assistant to Professor Koch, in the Institute for Infectious Diseases, treated 117 cases of diphtheria with antitoxine or heilserum, with 13 deaths—that is, a mortality of 11.1 per cent. Of 73 cases treated within three days after the onset of the disease, there was only 1 death—a mortality of 1.4 per cent. and in this case the time the disease had existed was uncertain; it may have been longer than three days, but was not less. Death occurred from pneumonia. In the children's clinic of "Charité" the mortality from diphtheria of the throat and larynx previous to the serum treatment was as follows: In the year 1889-90, 52.4 per cent; in 1890-91, 60.1 per cent; in 1891-92, 60.8 per cent; 1892-93, 56.4 per cent. The report for 1894 has not yet been published. Since the above list of 117 cases was published, Dr. Kossel has treated about 50 cases more with a mortality of only 10 per cent.

At a recent meeting of the Berlin Medical Society, Dr. Hausemann condemned the treatment of diphtheria with antitoxine, claiming that it produced nephritis, and besides, had no curative action. This criticism was ably refuted at the next meeting, December 5, 1894, by Pro-

fessors von Bergmann and Virchow. Professor von Bergmann stated that the number of children with diphtheria treated in his division during the twelve years immediately preceding the inauguration of the antitoxine treatment was 4,054, with 2,086 tracheotomies, and a total mortality of 52 per cent. Professor Virchow gave the result of treatment at the Kaiser and Kaiserin Friedrich Kinderkrankenhaus: Since March, 1894, 533 cases were treated, 303 with injections of antitoxine, with a mortality of 13.2 per cent, and 230 without antitoxine, with a mortality of 47.8 per cent. During the last period the mortality with heilserum was only 12.6 per cent. With such a change in the mortality, following immediately after the use of the serum, Professor Virchow said that it was impossible for him, as well as other colleagues, to doubt its efficacy. He continued:

All theoretical and other opinions must give way to what I might call these *brutal* figures.

I am not such a worshiper of the heilserum as many of its first discoverers; we are still in doubt about many things which further experience may correct. But I can not refrain from saying that it is the duty of every earnest physician to use the remedy. The possibility that it may do harm is so insignificant that it may be neglected. It is very different from tuberculine in its time, when the injury was evident and the advantage was not.

Kossel, Roux, Martin, and Chaillon have observed that albuminuria occurred less frequently and was of shorter duration under the serum treatment. Antitoxine is also given to prevent the disease in those who have been, or are likely to be exposed, as school children and families in which cases have occurred. About one-fourth of the curative dose is given, and it is estimated that its protective effects last about fourteen days, when, if thought necessary, the dose should be repeated.

Respectfully, yours,

G. T. VAUGHAN,

*Passed Assistant Surgeon, M. H. S.*

MEXICO.

*Mortality in Vera Cruz during 1894.*

VERA CRUZ, December 31, 1894.

SIR: I beg to submit the following statement, as it may be of some value for future reference: During the year (1894) there were 1,605 deaths, of which 209 were from yellow fever and 40 from smallpox. During the months of June, July, and August yellow fever was at its worst, about 150 dying in these three months. I believe the population of this city is underestimated, as there is, in my opinion, fully 30,000, instead of 25,500, as reported on weekly sanitary reports. Estimating the population at 30,000 we have a death rate of 53½ to the thousand.

From some cause yellow fever appeared during the month of December, and there were several deaths. At the present writing it has almost disappeared, and with the assistance of a few northerners will likely be kept out until warm weather returns.

During the year I have given 92 bills of health and 55 supplemental bills of health to foreign vessels, and 86 of the former to American vessels. During the months that yellow fever prevailed I personally inspected vessels departing for the United States, satisfying myself of their sanitary condition, and have done all in my power to prevent any but first and second class passengers being granted passage to any of our southern ports. I have also forbidden crews of American vessels being



granted leave to come ashore, and through this precaution am glad to say that not an American sailor has died from any contagious disease. One man, a deserter from the schooner *L. A. Edwards*, of Pascagoula, Miss., died from yellow fever. He was not an American citizen, but a Russian.

Your obedient servant,

CHARLES SCHAEFER,  
*United States Consul.*

To the SUPERVISING SURGEON-GENERAL M. H. S.

TURKEY.

*Cholera in Turkey.—Report of Sanitary Commissioner.*

(Report No. 111.)

CONSTANTINOPLE, December 20, 1894.

There are few vilayets in which this epidemic has not made its appearance. Nearly all the territory of the Turkish Empire has been visited by cholera, making many victims. At the present time cholera has disappeared from the vilayet of Broossa, but it has made its appearance at Diarbekir, where, according to the last official news, from November 22 up to the 5th instant, 65 cholera cases and 44 cholera deaths have been registered at Roka, a small city of the latter vilayet. From the 9th to the 10th instant only 1 cholera death occurred at the chief town of the vilayet at Diarbekir.

Cholera still continues raging at Adalia, as I have already mentioned in my previous reports. According to the official news, from the 11th to the 14th instant, 50 cholera cases and 24 cholera deaths have been registered. On the 16th instant a soldier was taken ill, presenting all the symptoms of cholera. Koch's bacillus was also found in the dejecta, but he recovered.

Smallpox is raging in an extraordinary way in Constantinople. During the month of November there were 149 smallpox deaths registered. Scarlet fever has abated. The prevailing diseases besides smallpox are sore throat and rheumatism.

SPIRIDION C. ZAVITZIANO.

STATISTICAL REPORTS.

CHILE—*Autofogasta*.—Month of November, 1894. Estimated population, 14,000. Total deaths, 38, including 2 from whooping cough.

CUBA—*Havana*.—Under date of January 5, 1895, the United States consul reports as follows:

There were 648 deaths in this city during the month of December, 1894. Twenty-seven of those deaths were caused by yellow fever, 7 by enteric fever, 7 by so-called pernicious fever, 1 by bilious fever, 10 by diphtheria, 8 by smallpox, 17 by the grippe, 1 by glanders, 41 by enteritis, 22 by dysentery, 2 by cholera infantum, and 25 by pneumonia.

During the week ending January 3, 1895, there were 158 deaths, 3 of which were caused by yellow fever, with 8 new cases, approximately, 2 were caused by enteric fever, 3 by so-called pernicious fever, 1 by diphtheria, 10 by enteritis, 8 by dysentery, 3 by smallpox, 7 by pneumonia, and 2 by glanders.

FRANCE—*Nice*.—Month of November, 1894. Estimated population,

97,720. Total deaths, 141, including phthisis pulmonalis, 16; enteric fever, 2; measles, 1; and diphtheria and croup, 4.

GREAT BRITAIN—*England and Wales*.—The deaths registered in 33 great towns of England and Wales during the week ended December 29 corresponded to an annual rate of 18.0 a thousand of the aggregate population, which is estimated at 10,458,442. The lowest rate was recorded in Croydon, viz, 6.5, and the highest in Preston, viz, 26.2 a thousand.

*London*.—One thousand four hundred and thirty-four deaths were registered during the week, including smallpox, 1; measles, 46; scarlet fever, 14; diphtheria, 35; whooping cough, 14; enteric fever, 32; and diarrhea and dysentery, 7. The deaths from all causes corresponded to an annual rate of 17.2 a thousand. In greater London 1,817 deaths were registered, corresponding to an annual rate of 15.9 a thousand of the population. In the "outer ring" the deaths included 6 from diphtheria; scarlet fever, 4; and measles, 5.

*Ireland*.—The average annual death rate represented by the deaths registered during the week ended December 29 in the 16 principal town districts of Ireland was 22.3 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.2, and the highest in Drogheda, viz, 39.5 a thousand. In Dublin and suburbs 170 deaths were registered, including smallpox, 10; scarlet fever, 2; enteric fever, 2; and whooping cough, 3.

*Scotland*.—The deaths registered in 8 principal towns during the week ended December 29 corresponded to an annual rate of 22.1 a thousand of the population, which is estimated at 1,482,767. The lowest mortality was recorded in Leith, viz, 13.7, and the highest in Aberdeen, viz, 26.9 a thousand. The aggregate number of deaths registered from all causes was 629, including smallpox, 1; measles, 41; scarlet fever, 8; diphtheria, 4; and whooping cough, 18.

*Dundee*.—Month of November, 1894. Population, 158,719. Total deaths, 268, including phthisis pulmonalis, 16; typhus fever, 1; enteric fever, 1; scarlet fever, 6; measles, 6; diphtheria, 5; and whooping cough, 4.

RUSSIA—*Riga*.—Month of October, 1894. Estimated population, 215,000. Total deaths, 338, including phthisis pulmonalis, 48; enteric fever, 5; scarlet fever 12; diphtheria, 6; croup, 4; and whooping cough, 1.

TURKEY—*Constantinople*.—Month of November, 1894. Population, 700,000. Total deaths, 993, including cholera, 4; and smallpox, 145.

## MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated popula- tion.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aden	Dec. 1.	33,561	21									
Do	Dec. 8.	33,561	21									
Aix la Chapelle.	Dec. 15.	109,645	44									
Do	Dec. 22.	109,645	53									
Alexandria.	Dec. 13.	231,396	182					2		2	2	
Amherstburg	Jan. 5.	2,300	1									
Antwerp.	Dec. 22.	254,370	79						1			1
Barmen	Dec. 8.	124,000	40				1			1		2
Do.	Dec. 15.	124,000	32							3	2	3
Do.	Dec. 22.	124,000	36							2	2	1
Basle	do	80,000	37									
Batoum.	Dec. 25.	28,000	3			1						
Belfast	Dec. 29.	269,200	114				1	2				2
Belleville.	Jan. 7.	10,201	3									
Berlin	Dec. 8.	1,767,639	532				3	16	27	6		
Do	Dec. 15.	1,767,639	553				2	7	26	8		
Birmingham	Dec. 29.	492,301	164			1	2	1	1			3
Bologna	do	146,068	79									
Bombay	Dec. 11.	853,926	433									
Do	Dec. 18.	853,926	478	2								
Bordeaux.	Dec. 9.	252,415	121				1					1
Do	Dec. 16.	252,415	165				3					
Do	Dec. 23.	252,415	127				1					3
Bradford	Dec. 22.	221,610	82					2			13	
Bremen	do	127,500	36							4		
Bristol	do	226,578	73						1	1	1	1
Do.	Dec. 29.	226,578	66				1				1	
Brussels	Dec. 22.	498,440	208				1				2	22
Cairo	Dec. 13.	374,838	284				6			5		1
Calcutta	Dec. 1.	681,560	535	13		1	1			1	1	1
Do.	Dec. 8.	681,560	546	17						1	1	1
Cape Town.	Dec. 1.	55,000	41									
Cardenas	Dec. 22.	23,517	11									
Do.	Dec. 29.	23,517	12									
Do.	Jan. 5.	23,517	10									
Cardiff.	Dec. 22.	150,200	51							2		1
Catania.	Dec. 23.	129,000	64							4		1
Chatham	Jan. 5.	9,052	1									
Chemnitz.	Dec. 8.	150,000	83							2	1	
Do.	Dec. 15.	150,000	79						1	4		
Christiania.	Dec. 22.	167,588	42							1		
Cienfuegos.	Jan. 5.	23,000	22				1					
Coaticook	do	2,500	1									
Cologne	Dec. 22.	311,989	125								4	2
Colon	Dec. 29.	5,000	4									
Copenhagen	Dec. 15.	341,000	120					1	3	9	4	
Crefeld	Dec. 29.	106,121	37									
Demerara	Nov. 3.	53,176	64							1		
Do.	Nov. 10.	53,176	28									
Do.	Nov. 17.	53,176	71									
Do.	Nov. 24.	53,176	56									
Denia.	Dec. 22.	14,000	9									
Dresden	Dec. 8.	316,600	112						1	4		2
Do.	Dec. 22.	316,600	99							6		2
Dublin	do	350,000	178			7		4	2			
Do.	Dec. 29.	350,000	170			8		2				
Dundee.	Dec. 22.	158,719	59					1	1	1	2	1
Do.	Dec. 29.	158,719	61								3	1
Leith	Dec. 15.	270,588	100			2	1	1	3	1	2	2
Flushing	Dec. 29.	15,250	4									
Frankfort on the Main.	Dec. 22.	203,000	53					1			2	1
Do	Dec. 29.	203,000	59							1	4	
Funchal	Dec. 22.	35,665	11					5				
Ghent	Dec. 29.	153,803	74									
Gibraltar	Dec. 23.	25,800	14			1						
Do	Dec. 30.	25,800	9									
Glasgow	Dec. 22.	686,820	308					1	5	4	35	9
Do	Dec. 29.	686,820	324					2	7	3	24	14
Gothenburg	Dec. 15.	108,801	40						1	1		
Do	Dec. 22.	108,801	40						1	6	6	1
Halifax	Jan. 5.	38,700	27						1			
Hamburg.	Dec. 22.	598,372	483					3	6			2
Do	Dec. 29.	598,372	176						2	5		

## MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—							
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.
											Whooping cough.
Hanover .....	Nov. 17....	197,000	53								
Do.....	Nov. 24....	197,000	51								
Do.....	Dec. 1.....	197,000	62						2		
Do.....	Dec. 8.....	197,000	57								
Kehl-Strasbourg .....	Dec. 15....	129,556	50							3	1
Kingston, Canada.....	Jan. 11....	17,808	5								
Licata.....	Dec. 22....	20,000	9								
Liege.....	Dec. 29....	155,898	45					1	1		
Liverpool.....	Dec. 15....	507,230	239		1	3	4	2	6	6	
Do.....	Dec. 22....	507,230	220		1	2	5	5		1	3
Do.....	Dec. 29....	507,230	212		1	1	3	4		5	2
Leeds.....	do.....	388,761	159							1	25
Leighorn.....	do.....	102,956	52					1			
Leith.....	Dec. 15....	72,003	15							1	
London, Canada.....	Jan. 5.....	35,000	4								
London, England.....	Dec. 22....	5,948,300	1,870		1		37	14	52	39	36
Do.....	Dec. 29....	5,948,300	1,817		1		42	18	41	51	17
Lyons.....	Dec. 15....	500,000	167							1	
Madras.....	Dec. 7.....	452,518	276								
Do.....	Dec. 14....	452,518	344	3						5	1
Madrid.....	Dec. 23....	482,816	342		5			3		5	5
Magdeburg.....	Dec. 8.....	222,601	100							14	2
Do.....	Dec. 15....	222,601	91							10	
Manchester.....	Dec. 22....	522,365	215					1	3	3	5
Do.....	Dec. 29....	522,365	182					3	2	7	6
Manila.....	Dec. 1.....	400,000	119								
Mannheim.....	Dec. 22....	88,000	46							6	8
Marsala.....	do.....	40,131	20		2		3				
Matamoras.....	Jan. 4.....	8,000	9								
Matanzas.....	Jan. 2.....	50,000	23								
Messina.....	Dec. 29....	87,500	68					3			
Montevideo.....	Dec. 8.....	239,667	46					2		1	
Moscow.....	Dec. 22....	800,000	464		1	2	1	5	22	5	5
Munich.....	do.....	390,000	147						2	7	3
Mayence.....	Dec. 29....	72,281	21								
Nagasaki.....	Dec. 15....	64,274						1			
Naples.....	Dec. 29....	540,000	368		1	1					
Newcastle on Tyne.....	Dec. 22....	201,947	69						1	1	3
Do.....	Dec. 29....	201,947	69							2	9
Nogales, Mexico.....	Jan. 5.....	1,200									
Nuremberg.....	Dec. 8.....	159,773	63								2
Do.....	Dec. 15....	159,773	58							2	
Odessa.....	Dec. 22....	324,500	145			1	1	1	12	8	2
Palermo.....	Dec. 24....	273,000	141					5		19	
Paso del Norte.....	Dec. 29....	7,500	5								
Do.....	Jan. 5.....	7,500	7								
Plymouth.....	Dec. 29....	86,781	32					1	1	1	2
Prague.....	Dec. 15....	192,120	104						2	1	
Do.....	Dec. 22....	192,120	113						1	3	2
Puerto Cortez.....	Jan. 2.....	1,500	0								
Queenstown.....	Dec. 29....	15,000	4								
Rheims.....	do.....	105,408	29					1			1
Rome.....	Dec. 1.....	456,664	171					6	1	3	4
Rotterdam.....	Dec. 29....	228,596	103			1					1
St. Petersburg.....	Dec. 15....	1,100,000	*488					9	18	23	7
St. Stephens.....	Jan. 5.....	2,700	1								
San Juan del Norte.....	Dec. 23....	400	0								
San Pedro.....	Dec. 29....	3,500	2								
San Salvador.....	Dec. 24....	30,000	23		3			5			
Santos.....	Dec. 8.....	35,000			1						
Schiedam.....	Dec. 29....	25,580	9								
Sheffield.....	do.....	341,281	125						1		10
Sonneberg.....	Dec. 15....	12,000	5								
Do.....	Dec. 23....	12,000	8								
Southampton.....	Dec. 29....	67,283	21					1			2
Stettin.....	Dec. 22....	133,000	54					1	1	1	1
Stockholm.....	do.....	252,937	111						1	10	10
Stuttgart.....	Dec. 29....	139,659	50								
Do.....	Dec. 27....	139,659	46							4	
Tegucigalpa.....	Dec. 15....	12,000	0								
Do.....	Dec. 22....	12,000	1								
Trapani.....	do.....	43,095	10						1		2

\* Plague 1.

## MORTALITY TABLE, FOREIGN CITIES—Continued.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—						
				Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.
Trieste .....	Dec. 15....	158,314	84					1	1	7
Do.....	Dec. 22....	158,314	97					2	3	5
Truxillo .....	.....do.....	5,000	1							
Do.....	Dec. 29....	5,000	0							
Tuxpan .....	.....do.....	10,280	6							
Venice .....	Dec. 22....	158,187	82							2
Vera Cruz.....	Dec. 27....	25,500	26							
Do.....	Jan. 3.....	25,500	30		2					
Warsaw .....	Dec. 15....	515,654	218			1		1	9	8
Do.....	Dec. 22....	515,654	196			2		1	8	5
Yokohama.....	Nov. 20....	126,685								3
Do.....	Nov. 28....	126,685						1		3
Do.....	Dec. 4.....	126,685								2
Do.....	Dec. 11....	126,685								2
Zurich.....	Dec. 15....	123,000	36				1			3

By authority of the Secretary of the Treasury :

WALTER WYMAN,  
*Supervising Surgeon-General Marine-Hospital Service.*